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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SUCHFIELD, GEORGE A

ART UNIT PAPER NUMBER

3672

DATE MAILED: 09/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/775,861

Applicant(s)

ENGLAND ET AL.

Examiner

George Suchfield

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 15-20 and 24-31 is/are rejected.
- 7) ☒ Claim(s) 21-23 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 15, 20, 24 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Williams et al (5,470,823).

Williams et al discloses a process of stimulating a coal formation by injection of a treatment fluid which comprises an amphoteric surfactant (note, e.g., the ABSTRACT). While Williams et al (col. 3, lines 7-21) discloses that the well treatment fluid comprising the amphoteric surfactant is injected “preferably at injection rates lower than that which would fracture for(?) formation” or “at matrix injection rates”. Such disclosure does not exclude injection of the well treatment fluid at, or in excess of, fracturing injection rate(s). Thus, claim 15 is deemed anticipated by Williams et al.

As per claims 20, 24 and 25, the particular amphoteric surfactant employed by Williams et al, e.g., as set forth under Formula II (note cols. 3-5), appears to encompass an alkylaminocarboxylic acid/alkylaminopropionic acid or carboxylate. Further with respect to claim 25, the “coco” prefix recited is deemed encompassed by the “hydrocarbon residue of a naturally occurring fatty acid” comprising the “R1” component of Formula II.

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al (5,470,823), as applied to claim 15 above, and further in view of Root (3,254,719).

Root discloses the use of polyacrylamide as a friction-reducing additive for a well treatment fluid in processes of treating a subterranean formation.

Accordingly, it would have been obvious to one of ordinary skill in the art to which the invention pertains, to similarly include a friction reducing agent, such as polyacrylamide in the coal formation treatment fluid injected in the process of Williams et al, as taught by Root, in order to enhance or improve the treatment fluid injection and pumping efficiency of the Williams et al process.

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5. Claims 15-19 and 26-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Blauch et al (5,310,002).

Blauch et al discloses a process for, in one embodiment, fracturing a subterranean coal bed or coal formation utilizing an amphoteric surfactant in the fracturing fluid, as either component (ii) of the microemulsion-generating composition, or as the foaming agent (note, e.g., col. 6, lines 22-49; col 9, lines 15-20 and col. 22, line 66 – col. 23, line 7), as called for in claim 15.

It is further noted that Blauch et al (note col. 9, line 56 – col. 11, line 41) discloses at length the use of one or more conventional additives in the foam fracturing fluid, such as proppants, gelling or viscosifying agents, crosslinking agents, breakers and/or friction reducing agents. Accordingly, it is deemed that Blauch et al encompasses the components set forth in claims 16, 17 and 27-30.

Such disclosure of Blauch et al further indicates that either carbon dioxide or nitrogen may be used as the foaming agent gas in the myriad well applications set forth, as called for in claim 18. Thus, it is deemed that in the specific example, i.e., EXAMPLE III (col. 21, line 45 – col. 23, line 7) dealing with the treatment/fracturing of a coal formation, the overall disclosure of Blauch et al encompasses the use of carbon dioxide in the foamed pad fluid, injected prior to the foamed fracturing fluid, as called for in claim 19.

6. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blauch et al (5,310,002) as applied to claim 30 above, and further in view of Root (3,254,719).

Root discloses the use of polyacrylamide as a friction-reducing additive for hydraulic fracturing fluids in processes of fracturing a subterranean formation.

Accordingly, it would have been obvious to one of ordinary skill in the art to which the invention pertains, to similarly include a polyacrylamide as the "friction reducers" component of the foamed fracturing fluid injected in the process of Blauch et al (note col 11, lines 31-41), as taught by Root, in order to enhance or improve the fracturing fluid injection and pumping efficiency of the Blauch et al process.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Other references cited include processes for fracturing and/or treatment of subterranean coal formations.


8. Claims 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Suchfield whose telephone number is 703-308-2152. The examiner can normally be reached on M-F (6:30 - 3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 703-308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


George Suchfield
Primary Examiner
Art Unit 3672

Gs
August 24, 2004